**Capacity building needs for DSM - EIA focus**

## 1. Introduction

The level of current capacity to respond to, or initiate environmental impact assessment [EIA], is inadequate for both the "The Area' and EEZ's. This lack of capacity and inadequate core competencies will severely restrict the ability of both the ISA and Pacific Island Countries [PIC] to engage in, or manage potential impacts from deep sea mining [DSM].

In determining capacity requirements, PIC's need to consider the potential volume of work that might ensue. Some states have the potential within their EEZ for multiple tenements, while for others it may be a one off or rare experience.

Key areas identified in this report include; funding, competencies and training, knowledge management, and regional cooperation.

## 2. Funding

Current funding models within the ISA are inadequate to meet the needs of managing and responding to EIA's and the monitoring, management and regulation of mining related actives within the Area. Similarly, the ability of PIC's to engage in [for the Area] or responding to EIA's [within EEZ's] and the monitoring, management and regulation of mining related actives is hampered by gaps in current assessment and management structures and processes. An evaluation and redesign of EIA and management related fiscal structures is required to ensure adequate funds are available to both the ISA and PIC's to effectively fulfill their international obligations and local responsibilities.

The group identified key areas/principles to ensure adequate funding;

1. Proponent/contractor pays EIA related costs [ISA and PIC]
2. Environmental management levies [ISA]
3. Membership fees [ISA]
4. Government allocation and commitment [PIC] could be from consolidated revenue, external funding or in-kind assistance from external bodies such as SOPAC.

## 3. Competencies and Training

The Legal and Technical Committee [LTC] of the ISA may require additional EIA skills and expertise to compliment the range of skills currently available within the committee. A subsidiary expert body of the LTC may be one way of expanding competencies within the current structure. The ISA should evaluate other options with members/stakeholders to expand EIA specific competencies.

Within PIC's there is currently a wide range of existing capacities from the more highly developed in larger/mining orientated states to countries who have yet to develop EIA processes and supporting legislation and regulation. All states reported a general lack of capacity and a desire to increase in-country expertise in both assessing EIA's within the EEZ and conducting and assessing EIA's within the Area.

A dual EIA system [assessment, not decision making], where PIC's concentrate on country specific impacts and outsource the technical DSM specific to external providers, with a preference for a strengthened regional body, was well supported [see section 5]. The advantages of such a system include improving country EIA related skills without having to allocate scarce resources to developing DSM specific skills for a one-off, or low number of applications over many years. Any outsourcing of assessment advice would be a matter for individual PIC's who would retain sovereignty in all matters.

A vital and shared area of concern was the need to develop and retain skills and ensure the transfer of skills within the region, countries and departments.

Specific competency and training suggestions included;

5. Full utilisation of existing opportunities.

    a. The ISA has an endowment fund to provide both land based and ship board training. However this scheme is poorly accessed by states. The reason for this was identified as poor awareness of the scheme.

    b. The University of the Sea (UOS) has an established programme that provides ship-board training for senior students and young researchers (although there is flexibility to include appropriate senior professionals).

6. Better coordination/awareness of existing/new training opportunities ie USP and UPNG.
7. Additional training.

    a. Seconded personnel from states/organisations that have skills that can be transferred to local personnel.

    b. Apprenticeships/traineeships, knowledge transfer.

8. Strengthen EIA processes generally. A transfer of EIA related skills between non/DSM activities.
9. Appropriate incentives provided to local companies to build capacity.
10. Development of an external fund administered by the regional organisation or the ISA, with contributions from a fee charged to contractors with each application.
11. Retention pipeline. Knowledge/skill transfer and retention through -
    a. Traineeships, apprenticeships [dual senior/junior positions]
    b. Increase knowledge transfer post training - train the trainer
    c. Adequate retention incentives.

## 4. Knowledge Management

The lack of a regional comprehensive knowledge management system was identified as a significant obstacle to managing and responding to EIA's and the monitoring, management and regulation of DSM related actives within the Pacific. While a number of databases exist they were seen as lacking compatibility and accessibility with narrow foci such as marine minerals or fishing.

Sharing existing datasets via a regional database was identified as a solution for effectively responding to DSM/EIA activities as well as providing benefits to ISA controlled areas, PIC specific and regional environmental management generally. An expansion of the SOPAC marine minerals datasets [to be developed during DSM project] to include other relevant data was identified as a possible means of achieving this.

Key to the success of such a regional dataset would be the willingness of nations and regional bodies to contribute data at a relevant scale [ie combined fish/mineral data rather than individual boats]. This could be overcome by strong leadership and direction from the PICS through appropriate regional bodies and by establishing the database as a shared resource rather than one 'owned' by body hosting. Similarly, support by the SPC secretariat and the Regional Ocean Commissioner would contribute to the success of the regional comprehensive knowledge management system.

Regardless of dataset host, the need to fund the construction and importing of existing data into a regional dataset was identified. Volunteers were identified to assist in database design and funding, these include Paul Wilkes [IOC Samoa-Team Leader], Elaine Baker, Jan Steffen, Yannick Beaudoin and Akuila Tawale.

The Australian Geological Survey CSIRO, with the 57 levels was identified as a good example of an existing database that could be used as basis for a comprehensive regional knowledge management system.

Specific recommendations for the comprehensive regional knowledge management system included;

12. A minimum compatible standard between existing regional databases.
13. Database characteristic; User-friendly, accessible for data analysis / interrogation, updatable and provide metadata as available, accessible for compilations, multilayered, relevant scale.
14. Wide breadth of knowledge, holistic, incorporate social and cultural knowledge.

Questions to assist database design where also identified;

- Identify end users? – Resource managers of island nations?
- Identify what type of data is required?
- Compatibility of database systems?
- Bathymetric data requirement?
- Metadata & merging of existing databases?
- Quality control of sampled data in both collection and compilation.
- Open source software preferred, others – GIS, ARCGIS, MAPINFO?
- Broadband issues in region so access to database could be problem.
- Identify area of coverage – EEZ & areas between nations?
- Identifying databases that could contribute to regional dataset.
- Which organization should be managing this?
- Cultural knowledge should be incorporated?

**5. Regional Cooperation**

Recognising the benefits of cooperation and working through a regional body the group identified principles, structure, process/functions and a 'next steps' proposal.

Principles were identified to guide both an ISA body [currently LTC] and any regional cooperation/body.

15. Independence/neutrality.
16. Knowledge based (inclusive of traditional/local knowledge with scientific data)
17. Integrated multi-stakeholder overview
18. Respect jurisdictional responsibility and national sovereignty
19. Representative of 'the commons', state and ecological interests
20. Implementation accomplished within adequate timeframe as defined by responsible authority.

There was strong support for strengthening regional cooperation, it was envisaged that an existing body [such as SOPAC] could be strengthened to provide expert advice to states on EIA technical/specific DSM matters. It was noted that involving a regional organisation had the advantage of providing additional credibility to the decision making process which may assist with any negative public perception regarding marine mining.

The regional body would be be semi-permanent, adaptive, user demand-based body that provided/facilitated relevant experts on a case by case basis. Oversight by be achieved through existing representative structures. This activities would either be funded via existing activities in the regional body or through effective EIA funding mechanism in PIC countries. This would develop a "pool" of national, regional and international

experts who could be drawn from government, international, academic/research institutions, private industry and civil society organisations.

Suggested activities for the regional body include; development of a 'wish list' of all needs and propose realistic action plan, considering possible alternatives to EIA process that could be more valuable and appropriate in the region/jurisdiction of interest, and using DSM as a catalyst to consider consolidating or linking EIA for various ocean sectors.

The regional body would need to be legitimised and empowered by PIC with a detailed terms of reference. The group resolved that a proposal be put forward to SOPAC Division meeting. The meeting should determine the next deciding forum. This should enable PICs to decide on the way forward as far as the concept is concerned.

In addition, a mandate could be given by PIC Leaders to support the concept. Within the Pacific Region, this will require input from PICs in terms of what their priorities are and options could be developed to address this.

Table. The Capacity Building Group

| Name | Organisation |
|---|---|
| Lynda Brown-Kola | Mineral Resources Authority PNG |
| Linda Kaua | Pacific islands Forum Secretariat |
| Ian Graham | GNS Science New Zealand |
| Kakee Kaitu | Permanent Secretary MNR Tuvalu |
| Akira Tsune | Deep ocean Resources Dev. Japan |
| James Hein | USGS |
| Joseph Brider | National Envro. Service Cook Is |
| Paula Taumoepeau | Nautilus Minerals Tonga/TOML |
| Tausia Kerto | Geopacific Limited |
| Tim McConachy | Neptune Minerals Inc |
| Linwood Pendelton | Duke University |
| Venasio Nasava | Minerals Resources Dept. Fiji |
| Namita Khatri | MFAIC Fiji |
| Akuila Tawake | SOPAC |
| Jan Steffen | IUCN |
| Yannick Beaudoin | UNEP/GRID-Arendal |
| Ray Binns | CSIRO Australia |
| Charles Roche | Mineral Policy Institute |
| Christopher Ioan | DGMWR, Vanuatu |
| Brooks Rakau | DGMWR, Vanuatu |
| Toani Takirua | Deputy Secretary, Kiribati, MFMRD |
| Tearinaki Tanielu | MFMRD, Kiribati |
| Gregory Roaveneou | DMPGM, PNG |
| Elaine Baker | UNEP/GRID- Arendal |